

SEP 18 2006

Application No. 10/765,426
Filed: January 27, 2004
TC Art Unit: 1725
Confirmation No.: 1527

REMARKS

Claims 1-6, 11-14, and 16-21 have been rejected under 35 U.S.C. § 103(a) over Schmidt et al. (US Pat. No. 6,182,442) in view of Vidal et al. (US Pat. No. 6,397,581). Reconsideration of this rejection is respectfully requested.

In the presently claimed invention, metal coatings are formed on the inside surfaces of the parts to be assembled, including on the surface of the channel forming indentations. This has the dual advantages of ensuring sealing of the channels and of allowing bonding by hot compression.

Schmidt discloses a process for making a combustion chamber wall having channels for allowing a coolant to flow. The combustion chamber wall is made of two parts assembled together, the parts being made of a thermostructural composite material (C/SiC composite material). In one embodiment of the process (col. 6, lines 45-67), the bonding is achieved by chemical reaction under pressure and heat between a Cr₂O₃ or Al₂O₃ layer formed on the inside surface of one part and a SiC layer formed on the inside surface of the second part, in the areas remaining after formation of the cooling channels (col. 6, ll. 51-55). Thus, the SiC layer is limited to the portions of the inside surface of the second part that come into contact with the inside surface of the first part. No sealing of the channel walls is achieved.

Vidal discloses a process in which the inside surfaces of the parts to be assembled are provided with a metal coating that seals the channels formed in one part. The bonding of the parts is carried out by brazing, the metal coatings serving as a base for the brazing alloy.

Using metal coating both for sealing the inside surfaces of the parts to be assembled, including the inner surfaces of the channels, and for bonding by hot compression cannot, however, be derived from this cited art. Rather, applying the teaching of Schmidt to Vidal would merely lead to the formation of ceramic layers on the metal coatings of

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Vidal to allow bonding by chemical reaction between those ceramic layers. Applying the teaching of Vidal to Schmidt would merely lead to the substitution of brazing for the chemical bonding of ceramic layers. No suggestion can be derived from Schmidt that metal coatings such as disclosed by Vidal could be directly used for achieving bonding by hot compression, eliminating the need for brazing, since Schmidt discloses bonding by chemical reaction between specifically formed ceramic layers.

Independent claim 1 specifically recites the step of assembling the first and second parts together by bonding said inside faces together by hot compression using the metal coatings. Accordingly, claim 1 and the claims dependent therefrom are believed to be patentable over Schmidt in view of Vidal.

Claims 7, 8, and 15 have been rejected under § 103(a) over Schmidt et al. in view of Vidal et al. and further in view of Walsh (EP 0306140). These claims are believed to be patentable for the reasons set forth above with respect to claim 1. Accordingly, no further discussion is believed necessary at this time.

Claims 9 and 10 have been rejected under § 103(a) over Schmidt et al. in view of Vidal et al. and further in view of Jahnke (US Pat. No. 4,611,752). These claims are believed to be patentable for the reasons set forth above with respect to claim 1. Accordingly, no further discussion is believed necessary at this time.

Claim 1 has been objected to. The informality noted by the Examiner has been corrected. Accordingly, this objection is believed to be overcome.

Claims 7, 9, and 10 have been rejected under 35 U.S.C. § 112, second paragraph, for reciting improper Markush language. These claims have been corrected. Accordingly, this rejection is believed to be overcome.

The specification has been amended to correct an obvious typographical error.

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In view of the above amendments and remarks, all claims are believed to be in condition for allowance, and reconsideration and indication thereof are respectfully requested. The Examiner is encouraged to telephone the undersigned attorney to discuss any matter that would expedite prosecution of the present application.

Respectfully submitted,

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